R E P O R T R E S U M E S

ED 019 951 JC 680 198

BLOCK SCHEDULING IN THE COMMUNITY JUNIOR COLLEGE.

BY- COURSON, CLIFFORD C. O'BRIEN, CORINNE

PUB DATE 68

EDRS PRICE MF-$0.25 HC-$0.68 15P.

DESCRIPTORS- *JUNIOR COLLEGES, *SCHEDULING, *TIME BLOCKS, GENERAL EDUCATION, *CLASS ORGANIZATION,

"BLOCK SCHEDULING," DEFINED AS PLACING A GROUP OF STUDENTS IN A COMMON BLOCK OF BASIC COURSES TO SHARE THE SAME DAILY CLASS SCHEDULE, PERMITS INSTRUCTORS TO MEET A MORE COHENSIVE GROUP. IT ALSO SIMPLIFIES REGISTRATION AND SCHEDULING, AS STUDENTS ACCEPT A PREPARED GROUP OF COURSES INSTEAD OF INDIVIDUALLY SELECTED ONES. FOR THE STUDENT, IT MEANS BELONGING TO A GROUP, BOTH IN AND OUT OF CLASS, INSTEAD OF FEELING ALIENATED. BREVARD JUNIOR COLLEGE TRIED BLOCK SCHEDULING TO TEST THE HYPOTHESES THAT (1) STUDENTS WILL ACHIEVE A HIGHER GPA AND (2) ATTRITION WILL DECREASE. NEITHER STUDENTS NOR INSTRUCTORS WERE AWARE OF ANY SPECIAL TREATMENT. FROM THE GENERAL EDUCATION PROGRAM, FOUR BASIC BLOCKS WERE SET FOR 78 STUDENTS WITH HIGH SCHOOL GPA'S OF C TO B. AS A CONTROL GROUP, 249 STUDENTS WERE ENROLLED IN SIMILAR COURSES BUT IN A NON-BLOCK SEQUENCE. THE BLOCK STUDENTS PERFORMED AT A SIGNIFICANTLY HIGHER LEVEL, THUS SUPPORTING THE FIRST HYPOTHESIS. ABOUT 9 PERCENT OF THE BLOCK GROUP AND 8 PERCENT OF THE CONTROL GROUP WERE CLASSED AS DROPOUTS IN THEIR FIRST TERM. THIS DOES NOT SUPPORT HYPOTHESIS (2), ALTHOUGH THE TIME PERIOD OF ONLY ONE TERM IS NOT CONCLUSIVE. WHEN SUBJECTIVE EVALUATIONS WERE COLLECTED, SEVERAL INSTRUCTORS COMMENTED THAT MORALE APPEARED HIGHER IN THE BLOCK CLASSES. STUDENTS' RESPONSES VARIED, BUT, IN GENERAL, THEY LIKED BOTH THE SIMPLIFIED REGISTRATION AND HAVING THE SAME CLASSMATES FOR ALL COURSES. THE FINDINGS INDICATE FURTHER INVESTIGATION TO BE WORTHWHILE. (HH)

FILMED FROM BEST AVAILABLE COPY

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

ERIC

Block Scheduling in the Community Junior College

Clifford C. Courson and Corinne O'Brien

Brevard Junior College

ED 015951

The term "block scheduling" is heard more frequently as institutions of higher education struggle with the administrative problem of registration and placement of increasingly larger numbers of students. As used in the present paper, block scheduling refers to the practice of placing a group of students in a common block of basic courses such that a common group of students will share the same daily class schedule. From the faculty point of view, several instructors will face a common and more cohesive group as they meet in their instructional areas.

Block scheduling seems desirable basically for two reasons. In the first place, the administrative problem of registration and scheduling students becomes quite simplified when students accept a prepared group of classes as opposed to individually selected courses. In the second place, there would seem to be some potential values to the student enrolled in a block schedule. As an almost inevitable consequence of growth in size of student bodies in attendance at a college, there are the concomitant problems of depersonalization in the educational process. Students seem to feel that they are just a number, nobody really recognizes them as an individual, they are lost in the crowd, they lack identification in a recognizable group, etc. Presumably, placement of a number of students in a common block schedule would create the conditions under which students could form a group sharing common experiences both in class as well as in other campus activities.

JC 680 198

The Problem

UNIVERSITY OF CALIF.
LOS ANGELES

MAY 1 1968

CLEARINGHOUSE FOR
JUNIOR COLLEGE
INFORMATION

It seems safe to assume that a student who feels identified with a specific group within a large number of students in a college setting is more likely to show evidence of effective functioning than would a student who feels alienated or apart from a specific reference group. For this reason, it was decided to initiate block scheduling opportunities at Brevard Junior College.

Brevard Junior College (BJC) is a fully accredited two-year comprehensive community college located in Cocoa, Florida, a short distance from Cape Kennedy. At the time of the present study, the student body was composed of roughly 2500 full-time students and an equal number of part-time students.

While the enrollment figures are not as large as those of many other colleges, the student body was of sufficient size to generate many complaints from students about feelings of depersonalization and alienation. Since BJC has no dormitories, and had no student center at the beginning of the present study, there were few meaningful opportunities for students to become members of specific groups within the total student body. As is true for many colleges with a largely commuting student body, the prevailing practice is for students to drive to the campus at times classes are scheduled and to leave as soon as their classes are concluded for the day. Participation in student activities and clubs was minimal and roughly 10% of the student population exercised their ballots during student government elections.

BJC offers both university parallel and technical-terminal programs of study, but approximately 85% of the full-time students attempt to pursue the university parallel course. It is estimated that from the group of students who enroll on a full-time basis in the university parallel program,

13% will complete the requirements for an Associate of Arts degree and transfer to a four-year institution. The College admits any applicant who is a high school graduate or the equivalent.

Two factors, then, contributed to the undertaking of the present study. We were concerned, first of all, about attacking the problems of alienation and loss of identification for students in a moderately large college population. We were also concerned with the problem of an attrition rate which seemed unreasonably high for the kind of student population in attendance. Hence, we planned and executed a program of block scheduling in order to examine the following hypotheses:

1. Students who are participating in a block schedule will perform significantly better as measured by grade point average than will students who are not participating in a block schedule.

2. The drop-out or attrition rate will be significantly lower for students enrolled by block scheduling than for students who are not participating in a block schedule.

The Method

BJC requires that university parallel students complete 41 semester hours of general education courses as part of the program leading to an Associate of Arts degree. Since the overwhelming majority of BJC students plan to complete the 41 required hours of courses, the basic blocks for courses in this study were selected from the required general education sequence. Four basic blocks were established by packaging the necessary class cards as follows:

Block "A"

EH 101 -- Communication (Freshman English)

PSY 201 -- General Psychology

MS 101 -- Fundamentals of Mathematics

SLS 201 -- Man's Cultural Heritage (Social Science Survey)

Block "B"

EH 101 -- Communication (Freshman English)

PSY 201 -- General Psychology

PSLS 101 -- Physical Science Survey

SLS 201 -- Man's Cultural Heritage (Social Science Survey)

Block "C"

EH 101 -- Communication (Freshman English)

PSY 201 -- General Psychology

PSLS 101 -- Physical Science Survey

HS 201 -- Humanities

Block "D"

EH 101 -- Communication (Freshman English)

PSY 201 -- General Psychology

MS 101 -- Fundamentals of Mathematics

HS 201 -- Humanities

Each of the courses included in the blocks carried 3 semester hours of credit and the blocks were attractive to students with respect to the hours they occupied in a student's daily schedule. The selection of instructors to be involved in the blocks was a random procedure which resulted in a good cross-section of our faculty with regard to the degree of competency instructors are considered to have in the eyes of both students and administrators.

Block Placement -- Once the blocks had been established, there remained only the task of selecting students to be enrolled. This was accomplished during the Fall 1967 registration program by publishing descriptive

information about the blocks and furnishing this information to faculty advisors who assisted freshmen with course planning and selection. The faculty advisors were instructed that students must accept the entire block and in no case was it permissible to break up a block schedule package. It was permissible to add courses to the block package and in almost every case a physical education class was added.

The faculty advisors were further instructed to offer the block schedule packages to students who fell in the average range according to the results of the Florida State-Wide Twelfth-Grade Testing Program (FSWTGTP). The Florida State-Wide Twelfth-Grade Testing Program consists of a battery of five tests which are administered annually to all seniors in Florida high schools. The first of the five tests consists of a measure of academic aptitude. The remaining tests are subject matter achievement tests in English, Social Studies, Natural Science, and Mathematics. All of the test scores are reported as percentile ranks for the total population of Florida high school seniors in a given year. Hence, the scores on an individual test range from 00 to 99 and the range for the entire battery (obtained by adding the percentile scores on all five tests) is from 000 to 495. The instructions for offering block scheduling indicated that the subjects should have a total score within the range from 200 to 300.

In addition, the instructions provided for faculty advisors indicated that block subjects should have a high school grade average of "C" to "B."

The Experimental Group

While the instructions regarding student characteristics for block scheduling were not always followed by the faculty advisors, we did achieve establishment of the four basic block groups which totaled 78 entering students. The FSWTGTP scores ranged from 36 to 482 with a mean score

of 296.06.

The Control Group

For the purposes of this study, a control group of students was selected from those entering students who registered for 4 courses selected from the general education requirements. In effect, we had a control group which was enrolled in virtually the same courses as the experimental block students, but enrolled in a non-block sequence. There were 249 students in the control group and the FSWTGTP scores ranged from 112 to 487 with a mean of 325.42. As a result, any difference in achievement favoring the experimental group clearly could not be explained on the basis of superior ability as measured by test scores in favor of the experimental group. A summarization of the descriptive data for entering students is presented in Table 1.

- - - - - - - - -
Table 1 about here
- - - - - - - - -

The "Hawthorne Effect"

For some time we have recognized that when a relatively small group is separated from a larger group and treated in a differential manner which can be interpreted by the small group as individualized or preferential treatment, the general efficiency and cohesiveness of the small group tends to increase (Roethlisberger, 1962). This phenomenon is frequently referred to as the "Hawthorne Effect." In order to more accurately assess the real effect of block scheduling per se, it was decided that we should attempt to minimize the Hawthorne Effect in the present study. To accomplish this purpose, the block scheduling arrangements were not publicized in any manner. The block schedules were presented to the students as merely a convenient device to avoid some of the rigors of registration. No instructor teaching a block scheduled class was aware of this study or that the

class was different from any of his other classes. In this way, we attempted to minimize any feelings of "specialness," i.e., the Hawthorne Effect.

Results

Comparison of Academic Performance

At the conclusion of the first term for the 1967-1968 academic year, the actual grades earned by subjects in both the experimental and control groups were collected and analyzed. The overall results were first examined by comparing the mean grade point average (GPA) earned by each group based upon the 4-point system. The findings listed in Table 2 revealed that while no significant statistical differences were found between the mean GPA's earned, the observed differences might have some practical significance. That is, the mean GPA for the experimental group reflects an acceptable level of college achievement and the mean GPA for the control group reflects an achievement level below acceptable college standards. Finally, the sensitivity of a t-test for demonstrating a significant difference between the groups is dependent upon the nature of the underlying grade distributions and limited by the number of subjects in the study.

- - - - - - - - - -
Table 2 about here
- - - - - - - - - -

Further analysis of the data revealed that the distribution of grades earned by the control group was, by inspection, somewhat positively skewed, whereas the distribution for the experimental group was somewhat negatively skewed. As a result of this observation, and consideration of the sampling techniques for selecting subjects, distributions of actual grades earned were summarized and submitted to chi square analysis. The results of this comparative analysis for grade distributions of total grades awarded for both groups are presented in Table 3.

- - - - - - - - -
Table 3 about here
- - - - - - - - -

The findings listed in Table 3 suggest that there was a significant difference in the total grades earned in favor of the experimental group. This higher level of achievement was observed in spite of the earlier finding that the experimental group demonstrated lower average ability and preparation than did the control group.

The experimental group earned 3 fewer A's, 12 more B's, 2[illegible] more C's, 9 fewer D's and 13 fewer F's than would have been expected had their ability and preparation scores been equal to those of the control group. Moreover, when viewed in the light of the ability score differences favoring the control group, the significance level for the chi square reported in Table 3 should be considered as a conservative estimate.

The achievement gain for the experimental group is attributable to an increase in the number of B's and C's earned and a decrease in the number of D's and F's earned. The fact that fewer A's were earned is, perhaps, a reflection of the higher overall ability level favoring the control group. Hence, the findings suggest that students who participate in block schedules do perform at a significantly higher level than do students who are not participating in a block schedule.

Comparisons of Attrition Rates

For the purposes of the present study, a dropout was defined as a student who received grades reflecting failure to complete the term in all courses attempted. When the individual grade reports were examined in the light of this definition, roughly 9% of the experimental group and roughly 8% of the control group were classified as drop-outs during their first term in college. This finding does not lend support to the hypothesis that

the drop-out or attrition rate is lower for students enrolled by block scheduling than for students not participating in a block schedule.

The above finding may be a research artifact stemming from several considerations. To begin with, a satisfactory definition for the termination of college studies is difficult to support when restricted to a period involving only one college term. Moreover, to accurately assess the attrition rate in a community junior college, an extended evaluation which was not attempted in the present study may be required. Still another consideration would involve assessing whether the individual student considered himself to have terminated his college studies as opposed to some operational definition of termination. Our results suggest, in brief, that an extended follow-up study may be required to satisfactorily collect data pertaining to a meaningful attrition rate.

Subjective Evaluations

At the end of the term involved in the study, an attempt was made to collect subjective evaluations from both the instructor and the students involved in block schedules. These data were collected by means of a questionnaire administered at the end of the final examination period.

All of the instructors who responded indicated that they were not aware that the block class was in any way different from their other classes. Several of the responding instructors did comment that they felt the group morale was exceptionally higher in the block class when compared to other classes. These data suggest that we were able to minimize the "Hawthorne Effect" and avoid a feeling of "specialness" for the block groups.

The student responses were somewhat mixed and difficult to evaluate. However, there was definite evidence that the block students felt block

scheduling had simplified registration procedures, it had enabled students to register for the courses they wanted to take, and the block arrangement had been an important assistance in meeting and making new friends. They also strongly indicated that they liked having the same classmates in four courses. This latter finding suggests that while the "Hawthorne Effect" was controlled for the instructors involved, it may have had some effect upon the experimental group members.

Summary and Conclusions

This investigation compared achievement indices of students who were scheduled in blocks during their first term in a community college with the same indices for students who were not block scheduled. The findings indicated that while the block scheduled students had a lower average level of ability and achievement as measured by a test battery, they nonetheless showed a significantly higher level of academic achievement as measured by grades received at the end of the first term in college. There were, however, no observed differences in the first term attrition rate between the two groups.

The project was not publicized in order to minimize the "Hawthorne Effect" and the results suggest that more efficient gains in academic achievement could be obtained with appropriate publicity and recognition for the participants of block scheduling arrangements. The students who were members of the block scheduled classes expressed essentially positive reactions to the experience.

The findings clearly indicate that further experimentation with the block scheduling concept should be implemented. The potential gains for higher student achievement and the relative administrative ease of registering students in block schedules are compelling factors.

In addition to the basic general education blocks implemented in the present study, a logical next step would involve designing specialized blocks for entering students, i. e., a pre-engineering block, a pre-business administration block, a pre-education block, etc. Still another direction worthy of exploration would involve the implementation of block schedules for both terms of the first college year.

In summary, we need to continue our search for techniques, methods and concepts which will contribute to the individualization of the educational process and promote the possibility of realizing human potentials. The present study has objectively evaluated the merits of block scheduling as a step in these directions. While it is fully recognized that this is only a beginning and many questions remain, some light has been shed upon the merits of a scheduling problem shared by all institutions of higher education.

References

Roethlisberger, F. J. Management and Morale, Cambridge, Mass: Harvard University Press, 1962.

Table 1

Means and Ranges for Experimental Group, Control Group, and Total Population on Florida State-Wide Twelfth-Grade Testing Program

	N	Range	Mean
Experimental Group (Block-scheduled students)	73	86 - 482	296.06
Control Group (Unblocked schedules)	249	112 - 437	325.42
Total Population (Entering full-time students with FSWTGTP scores)	1167	006 - 488	286.73

Table 2

Mean GPA's for Experimental and Control Groups during First Term in College

	N	Mean GPA	Standard Deviation
Experimental Group (Block scheduled)	78	2.0[illegible]	.87[illegible]3
Control Group	249	1.89	.9069

Mean Diff. = [illegible].11

t-test = .9615

P = [illegible].1

Table 3

Distributions and Chi Square Analysis of Grades

Received during First Term in College

Grade	Experimental (block) Observed	Experimental Expected	Control (unblocked) Observed
A	19	25.4	86
B	83	71.4	212
C	134	113.9	337
D	37	45.9	153
F*	29	45.3	158
	302	301.9	946

Chi Square = 19.31 $.001 > P$

*Includes all grades which compute as F's, e.g., Incompletes, Failure from lack of attendance (E), etc.